

REMARKS

Reconsideration and allowance are respectfully requested.

U.S. patent practice amendments are made to the specification and abstract. No new matter is believed to be added. Approval and entry are requested.

The present application is directed to a communication system that combines a public mobile core network with an unlicensed-radio access network that includes a number of access points (e.g., home base stations) and access network controllers (e.g., home base station controllers) connected via a broadband network. Each access controller is associated with a location area identity in the public mobile network. For example, if the public mobile network is a GSM network, each access network controller is associated with a location area identifier (LAI) or routing area identity (RAI) according to the area it serves. In order to enable flexibility in the installation and removal of access points but also to simplify the installation and maintenance of the unlicensed access network, a mobile station roaming into the coverage area of the unlicensed access network may initially not be connected to the access network controller assigned to its current location as defined by the public mobile network location identifier. Instead, in accordance with one non-limiting example embodiment, the mobile station is connected to a default access network controller that retrieves the location identifier from the mobile station and uses this to formulate a request to a lookup table function that maps the broadband network addresses of access network controllers to location area identifiers. The default access network controller then retrieves the broadband network address of the access network controller assigned to the location area in question and forwards this to the mobile station. This enables the mobile station to establish a connection with the local access network controller. In a further non-limiting example embodiment, the mobile station connects initially

only to an access point, and the access point formulates the request to the lookup table to retrieve the address of the local access network controller and then establishes the connection to this access network controller.

All of the pending claims stand rejected under 35 U.S.C. §102 as allegedly being anticipated based on Gallagher. This rejection is respectfully traversed.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987). There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). Gallagher does not satisfy this rigorous standard.

Gallagher also describes a mobile communication system that integrates both licensed and unlicensed wireless systems. The unlicensed wireless system is referred to as an Indoor Access Network (IAN) and includes a number of indoor base stations (IBS) connected to an indoor network controller (INC) (also referred to as an “Iswitch”) via an access network that may be a broadband network (see Fig. 1A and [0049] and [0058]). The indoor network controller communicates with conventional voice and data networks using conventional respective voice and data interfaces (see [0055]). As described at [0079] to [0081], a set of one or more indoor base stations 128 under the control of a single indoor network controller 132 is defined by a set of location area and routing area identifiers (IAN LAI/RAI). The areas defined by these identifiers may be different from those of the GSM network or they may be the same. But Gallagher does not disclose that the indoor access controllers are associated with the GSM LAIs or RAIs.

As described in paragraph [0081], the IAN LAI/RAI is communicated to the mobile station when it registers with the indoor access network. There is no disclosure in Gallagher of *selecting, from among different indoor network controllers or Iswitches, an indoor network controller or Iswitch, based on a location, routing, or cell identifier received from a mobile station*. As taught at paragraph [0079], the location and routing areas define an assembly of indoor base stations but only “a single indoor network controller 132” (emphasis added). Consequently, once a mobile station roams into the coverage area of an indoor base station, the single indoor network controller 132 that controls these indoor base stations 128 is the only possible network controller that can provide access to the GSM core network via the base station (see paragraph [0083]). There is no possibility of a mobile station or indoor base station being provided with a broadband network address of another indoor network controller and subsequently connecting to this alternative indoor network controller.

Gallagher also does not disclose a lookup table or any other form of storage arrangement or device that is accessible by base stations or network controllers and contains information mapping the broadband network address of indoor network controllers or Iswitches to location information. In this regard, the Office Action contains on page 3 what appears to be a quote from Gallagher in paragraphs [0058] and [0078]-[0079], “network are provided unlicensed radio access to a fixed broadband network based on table mapping by locations areas identifier LAI.” But because Applicants are unable to locate this wording in Gallagher or any of the phrases in quotation marks in the office action, Applicants assume that these represent the Examiner’s own characterizations of Gallagher’s disclosure. The Examiner is requested to quote the language from Gallagher that supports each one of the Examiner’s characterizations of Gallagher in the office action.

Given the above analysis, Gallagher fails to disclose a number of features from claim 1 including a mobile telecommunications network with “a lookup table mapping a location area identity with address information for an access network controller on said broadband network.” Paragraph [0114] relied on by the Examiner simply includes a “table” of acronyms used in the Gallagher patent. Nor does Gallagher describe the claim features where “each said access point is arranged to connect a mobile terminal with a default access network controller, said default access network controller being adapted to receive a request from said mobile terminal containing information indicative of a last location area received by said mobile terminal, to submit a request to said lookup table containing said location area information, to receive address information from said lookup table for an access network controller mapped to said location area in response to said request and to transmit said address information to said mobile terminal via said access point, said address information enabling said mobile terminal to establish a connection with said addressed access network controller via said access point and said broadband network.” The Examiner is requested to identify what node in Gallagher corresponds to the claimed “default access network controller” and what different node in Gallagher corresponds to the claimed “access network controller mapped to said location area.”

Similarly, Gallagher also fails to disclose an unlicensed-radio access system including “a plurality of access network controllers connected to said core network portion” and “at least one lookup table containing information mapping location areas to address information of access network controllers on said broadband network” where “each access point is adapted to receive from a mobile station information indicative of a location area corresponding to a portion of said licensed mobile network, to obtain from said lookup table address information of an access network controller on said broadband network associated with said location area information and

to establish a connection with said addressed access network controller via said broadband network,” in accordance with claim 8 of the subject application.

For claim 13, Gallagher fails to disclose a method for establishing a connection between a mobile terminal and a core network portion of a mobile communications network via an unlicensed-radio access network, including the following steps: “a default access network controller receiving information indicative of a location area identity from a mobile terminal via an access point, said default access network controller submitting a request to a lookup table (containing data mapping a location area identity with an address of one of said access network controllers on said broadband network) using said location area identity information, receiving from said lookup table an address on said broadband access network of an access network controller associated with said location area identity and relaying said address to said mobile terminal via said access point to enable said mobile terminal to establish a connection with said addressed access network controller via said access point and broadband network.”

Gallagher also fails to disclose a method for assigning and connecting access points to an access network controller from “a plurality of access controllers” having the steps of: “receiving from said mobile station a location area indicator indicative of a location area of said licensed mobile network with which said mobile station was last in communication, retrieving broadband network address information for an access point switching controller associated with said location area indicator, and connecting said access point to said retrieved broadband network address of said an access point switching controller to establish a connection,” in accordance with claim 16.

Finally, Gallagher also fails to disclose an unlicensed-radio access network controller that “is arranged to communicate with a lookup table containing information mapping location areas

to address information for addressing access network controllers on said broadband network, said access network controller being further arranged to serve a mobile terminal as a default access network controller and to receive from said mobile terminal information indicative of a location area corresponding to a portion of said licensed mobile network, to obtain from said lookup table address information of an access network controller on said broadband network associated with said location area information, and to transmit said address information to said mobile station," as recited in claim 17.

Moreover, since Gallagher teaches that each set of indoor base stations and the associated indoor access controller that controls them forms an essentially fixed structure/configuration, Gallagher would not have suggested to a person skilled in the art any reason to enable access to an alternative access network controller.

Claims 5-7 and 9-12 contain all feature of the independent claim upon which each ultimately depends, and therefore, these claims are also patentable over Gallagher.

The application is in condition for allowance. An early notice to that effect is requested.

Respectfully submitted,

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